

### **Remarks and Arguments**

Claims 1, 2, 4-6, and 11-15 are pending in this application. Claim 1 has been amended to particularly point out the invention. Support for this amendment is found in the claims as originally filed. Claims 1, 2, 4-6, and 11-15 stand rejected as allegedly obvious. Applicant's response to each of the rejections is set forth below.

#### **35 U.S.C. § 103**

Claims 1, 2, 4-6, and 11-15 stand rejected as allegedly unpatentable over U.S. Patent No. 5,680,960 (hereinafter "Keyes") in view of U.S. Patent No. 5,135,485 (hereinafter "Cohen") and further in view of U.S. Patent No. 6,299,020 (hereinafter "Sudolcan"). Additionally, claim 5 stands rejected in view of the same three references and further in view of U.S. Patent No 4,262,542 (hereinafter "Freund"). The rejections are addressed below.

#### **Claims 1, 2, 4-6, and 11-15**

According to the Office, Keyes discloses all of the structure of claims 1, 2, 4, and 6, however, the Office admits that Keyes fails to disclose a pair of copper electroconductive terminals proximate the fill tube and control means responsive to the capacitance of the conductors for controlling the filling or release of fluid from the reservoir (Office Action, dated April 8, 2005, page 2). The Office believes that Keyes does disclose a pair of optical terminals and a control means responsive to the optical terminals for controlling the filling or release of fluid from the reservoir. The Office alleges that Cohen teaches a fluid sensing system having a pair of electroconductive terminals placed directly on the container. The Office concludes that it would have been obvious for skilled artisan at the time the invention was made to replace the optical sensors of Keyes with the electroconductive terminals taught by Cohen because Sudolcan recognizes that optical sensors can have deficiencies when the material to be dispensed is less opaque and that electroconductive terminals are more reliable for these types of materials. Applicant respectfully disagrees and thus traverses the rejection.

### **The Claimed Invention Provides Unexpected Results**

Applicant submits herewith the declaration of Anthony DiLeo which points out deficiencies with the Keyes reference cited by the Office and also details surprising results obtained by the invention. Applicant believes the declaration provides objective evidence which overcomes the alleged prima facie case of obviousness. The declaration points out that the invention includes a device for dispensing liquids in predetermined amounts, that is more accurate than previously described devices, does not require precalibration, and will work for any liquid. Applicant notes that neither Sudolcan nor Cohen describes a device which is suitable for aliquoting predetermined volumes. Rather, Sudolcan describes a beverage dispenser, which signals when a concentrate source requires replenishing, and Cohen describes a plastic disposable bag which includes a sensing system for determining when the bag is either full or empty. Applicant further notes that the Office has alleged that the motivation for combining the cited references stems from the added benefit capacitance allegedly provides for more opaque liquids. The Office does not allege that the references provide an improved, more accurate apparatus suitable for repeatedly and accurately aliquoting a predetermined volume. There is nothing in either Sudlocan or Cohen that would lead a skilled artisan to believe deficiencies in Keyes could be remedied by combining the respective teachings of Keyes, Sudolcan, and Cohen.

Because the declaration provides objective evidence which overcomes the alleged prima facie case of obviousness, Applicants respectfully request withdrawal of the rejection.

### **The Claimed Invention Is Not Prima Facie Obvious**

The Patent and Trademark Office (PTO) bears the burden of initially establishing a prima facie case of obviousness. MPEP § 2142. MPEP § 2143 provides the standard required to establish a prima facie case of obviousness. "First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine what the reference teaches. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references combined) must teach or suggest all the claim limitations."

The motivation to make the claimed invention and the reasonable expectation of success must both be found in the prior art, not the applicant's disclosure. *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991). The references must be considered as a whole and must suggest the desirability, and thus the obviousness of making the combination. *Hodosh v. Block Drug Co., Inc.*, 229 U.S.P.Q. 182, 187 n.5 (Fed. Cir. 1986); MPEP § 2141. The Office has not met its burden in this case.

#### **No Motivation To Combine the Cited References Existed**

The Office alleges that no reason is given why the motivation is deficient and thus concludes the argument is moot (Office Action dated 10/14/2005). Applicant respectfully disagrees. An explanation regarding the lack of motivation was provided in Applicant's response filed on August 3, 2005. In summary, Applicant believes the Office has pointed to nothing as of this date in either Keyes or Cohen that would motivate a skilled artisan to combine the sensing mechanism of Cohen with the apparatus in Keyes. Instead the Office alleges that Sudolcan provides the requisite motivation. Applicant respectfully disagrees with the assertion that Sudolcan provides motivation for combining the cited references as the Office suggests. As set forth below, Sudolcan would not motivate the artisan to make the claimed invention, but rather would motivate an artisan to make an apparatus that relies on two distinct sensing mechanisms, one electrical and one optical. Nothing in Sudolcan suggests the desirability of relying on capacitance alone.

According to the Office, Sudolcan recognizes that optical sensors can have deficiencies when the material to be dispensed is less opaque. The solution Sudolcan suggests, however, does not include a "control means responsive to the capacitance of said current," as recited in claim 1. Detection of fluid levels disclosed by Sudolcan requires both electrical monitoring and photo-detective monitoring of fluid levels ("it is important that the first sensing unit and the second sensing unit be in cooperative engagement with one another. . . . Therefore, linking the first sensing unit in operative engagement with the second sensing unit enables the processor to 130 to detect fluid for any beverage fluid without the necessity of calibration to compensate for beverage fluid opaqueness" ) (Column 6, lines 13-25, emphasis added). The skilled artisan faced with the problem of measuring fluid levels after reading Sudolcan would resort to a two

step method involving both photodetection and electrical monitoring and thus avoid “the necessity of calibration to compensate for beverage fluid opaqueness.” Nothing in Sudolcan would lead the skilled artisan to rely on capacitance alone to measure fluid level or to provide “control means responsive to the capacitance of said current for selectively controlling said dispensing of fluid from said tube assembly, or said introduction of fluid from said reservoir, or said release of fluid from said reservoir,” as recited in claim 1. Sudolcan never suggests relying on capacitance alone. Accordingly, Applicant believes Sudolcan would not motivate the skilled artisan to combine the disclosures of the cited references to arrive at the claimed invention.

Neither Keyes nor Cohen provides the requisite motivation to combine the cited disclosures and thus lead the skilled artisan to the claimed invention. Moreover, as stated above the Office has pointed to nothing in either of these references to suggest that combining their disclosures would be desirable. The Office is reminded that the motivation to combine and the desirability to combine must be found in the references themselves. Because this requirement of the prima facie case has not been satisfied, Applicant submits that the claimed invention is not obvious and thus again requests withdrawal of the rejection.

#### **Claim 5**


According to the Office, Keyes in view of Cohen and further in view of Sudolcan disclose all of the limitations of claim 5 except using pulsed current. The Office alleges Freund teaches an electroconductive flow meter using pulsed current. Claim 5 depends on claim 1. Applicant notes that Freund does nothing to cure the defects in the prima facie case of obviousness set forth above and thus the same arguments apply to claim 5, as well. Moreover, because claim 5, depends on claim 1, Applicant believes that the declaration of Anthony Dileo which overcomes the alleged prima facie case with respect to claim 1, does the same for claim 5. Accordingly, Applicant respectfully requests withdrawal of the rejection.

### CONCLUSION

In view of the foregoing remarks, Applicant respectfully requests the reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account.

Respectfully submitted

A handwritten signature in cursive script, reading "E Stewart Mittler", is written over a horizontal line.

E. Stewart Mittler

Attorney for Applicant

Reg. No.50,316

January 17, 2006  
Millipore Corporation  
290 Concord Road  
Billerica, Massachusetts 01821

Tel.: (978) 715-1086

Fax: (978) 715-1382